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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,260	07/03/2003	Stewart Sherrit		4119

7590 06/02/2005
Stewart Sherrit
4325 Dunsmore Ave.
La Crescenta, CA 91214

EXAMINER

LE, HUYEN D

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 06/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/612,260

Applicant(s)

SHERRIT ET AL.

Examiner

HUYEN D. LE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 7/3/2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The Applicant is required to submit the copy of the publication of Sherrit et al. filed in the IDS on 07/03/2003 for the consideration. No copy of this publication of Sherrit is enclosed in the file as mentioned in the Remarks filed on 12/13/2004.

Specification

2. The substitute specification filed 12/13/04 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: the added text to the end of paragraph [018] of the Detailed Description of the Preferred Embodiment Section for the reflector 152 is under the Remarks. This added text should be labeled as amendment to the specification.

Objection C.F.R. 1.75

3. Claim 1 is objected to as presented inconsistencies.

In claim 1, line 8, before "horn", "The" should be changed to --the--.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification, as original filed, does not disclose that the other surface of the horn is connected to a liquid for mechanical output as now claimed in claim 1.

The specification, as original filed, does not disclose that the apparatus amplifies vibrations by increasing the extension and contraction along the length of the apparatus as now claimed in claims 1 and 7.

5. Claim 6 recites the limitation "the horn tip" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura et al. (U.S. patent 5,896,460).

Regarding claim 1, Nakamura teaches an apparatus for amplifying vibrations along the length of the apparatus to be produced by an actuator (see the sound path in the form of a horn in figures 2-3). The apparatus comprises a horn (18, 20, 40, 42, 44, 48, 52) that forms the parallel acoustic paths and has two surfaces perpendicular to the extension of the horn as claimed (figures 2-3). As shown in the drawings, one surface of the horn (18, 20) is directly connected to the actuator (12, 14, 16a, 16b, 26) and the other surface is connected to a solid piece (44, 48, 52) for mechanical power output. Nakamura further teaches the horn with the changes in directions for the sound waves as claimed (figure 2).

Regarding claims 2 and 6, Nakamura shows the horn that is configured along an axis of an extension of the speaker system, an adjustable fold thickness as claimed (figure 2).

Regarding claim 4, Nakamura shows a stack of piezoelectric elements that are configured and encircled by the horn as claimed (figure 2).

Regarding claim 5, Nakamura shows a hollow core as claimed (figure 2).

Regarding claim 7, Nakamura shows a reflector (56, 58, 60, 62, 64) that is connected to a base of the horn to be folded as claimed (figures 2-3).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al. (U.S. patent 5,896,460).

Nakamura teaches a stack of piezoelectric element. Nakamura does not specifically teach a stack of a plurality of piezoelectric elements as claimed. However, it would have been obvious to one skilled in the art to provide a plurality of piezoelectric elements for the Nakamura speaker for providing a powerful speaker system.

Response to Arguments

10. Applicant's arguments filed 12/13/04 have been fully considered but they are not persuasive.

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Responding to the arguments about claim 1, Nakamura does teach the use of the horn for amplifying vibrations that are produced by an actuator as claimed, and one surface of the horn that is connected to a solid piece for mechanical power output as claimed (figures 2 and 3).

Responding to the arguments about claims 2 and 6, the Applicant should note that Nakamura does teach the adjustable fold thickness design as claimed (figure 2).

Responding to the arguments about claim 4, Nakamura does teach a piezoelectric stack as claimed.

Responding to the arguments about claim 5, Nakamura does show a hollow core (figure 2) for transmitting the sound waves from one side to the other as claimed. The Applicant does not claim or disclose the movement of solid, liquid or gaseous materials from the top through the bottom of the apparatus as argued in the Remarks.

Responding to the arguments about claim 7, Nakamura teaches a reflector (56, 58, 60, 62, 64) as claimed.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CURTIS KUNTZ can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HL
May 30, 2005



HUYEN LE
PRIMARY EXAMINER